

EMPLOYMENT OF PART-TIME INSPECTORS IN A RADIOLOGICAL HEALTH PROGRAM

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A COMPREHENSIVE radiation code promulgated in 1955 by the Public Health Council of the New York State Department of Health required all radiation installations to be registered with the health department by March 1, 1956. Administrative rules of the health department now require that radiation installations be inspected at specified intervals. These rules, necessary as they were, posed an immediate enforcement problem. In New York State, outside of New York City, there are about 7,400 X-ray units located at 6,400 installations.

One of the immediate tasks facing the radiological health section of the New York State Department of Health was the development of a thorough understanding about the requirements of the code on the part of operators of X-ray installations and health department personnel. Operators would have to be advised as to how they could conform to the new requirements of the code.

Experience in other programs has convinced us that face-to-face meetings with the operators at the installation are very effective in obtaining understanding and cooperation. At such meetings the State health department personnel observe equipment and techniques, note hazards, and show the operators how and why improvements and corrections can be made.

An inservice training program in radiological health for State health department personnel was established prior to 1955 and is still in operation.

A limited number of inspections were made in 1955 and 1956; and in 1957, full-time State and local health personnel visited 487 installa-

tions. At this pace, it would take several years to complete the all-important first visit to each of the 6,400 installations.

The pace picked up speed in 1958 when 2,373 inspections were made, mainly because of more active participation by local health units. However, the addition of two school teachers as inspectors on a vacation-time basis also was important. They were trained by State health department personnel and worked during July and August. When the quality and quantity of their work was evaluated, it was clearly evident that they had performed competently.

With the excellent work records of these two men as credentials, the department of health was able to get funds for 80 man-weeks of temporary help the following summer.

These temporary men were employed to supplement the existing staff in order to complete the first visit to each of the installations at the earliest practical date. On completion of the initial inspection of all installations, the need for temporary personnel will be considerably reduced.

The personnel office of the department canvassed applicants who had previously sought employment. Universities and other educational institutions were contacted. All applicants were interviewed and their qualifications were considered on the basis of their education, training and experience, availability of a car, and residence. A degree in the sciences or engineering, with a physics or chemistry major, and teaching experience in these fields at high school or college level were required. Participation in a civil defense radiological health program was considered especially desirable, and some applicants were in fact recruited through the office of local civil defense directors.

Although applicants were required to pro-

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vide their own transportation, the State reimbursed them at the rate of 8 cents per mile. Those residing in areas where the greatest workload existed were given preference, when feasible, in order to minimize traveltime and expenses.

Nine men were recruited by June 1. For the first 3 days of their employment they were given a training and orientation course. A physicist from the University of Rochester and radiological health personnel from the State health department were the instructors. The course included the nature and production of X-rays, shielding, radiation protection, monitoring, and actual inspection of field units.

When the course was completed, the nine men were assigned to local health departments where they were supervised by a full-time medical health officer. Technical assistance was provided by the radiological health section in the State health department. The men were made responsible for instruments and equipment issued to them by the department. An assignment log of these instruments and their condition at issuance was maintained by the radiological health section. Pocket dosimeters were issued so that each employee would know his cumulative exposure to radiation and any dose rate he was absorbing at any given time. Each man was given a letter of introduction and identification.

Work Method of Part-Time Inspectors

To avoid fruitless visits, local health departments set appointment dates for inspections with operators of X-ray installations. Arranging appointments was made easier when professional societies were notified in advance that X-ray inspections were to be made in their area.

At each inspection, the temporary inspector prepared a written report and gave it to the local health officer or public health engineer. These reports were reviewed in the local health department and pertinent facts and comments were sent, in letter form, to operators of X-ray installations. Inspectors were not permitted to make administrative or policy decisions. If an operator refused to permit his facility to be inspected, the inspector referred the matter to

the local health officer. Very few problems of this nature occurred.

Each temporary inspector also submitted weekly reports to the State health department's radiological health section, stating the number of inspections completed and noting the amount of radiation dosage he received during the week. Radiation dosage to the inspectors averaged less than 25 mr per week, although one accident, due to a defective timer switch on a portable unit, exposed an inspector to 100 mr.

The number of inspections per week by temporary employees ranged from 16 to 27. These variations in performance were due to such factors as unequal traveltime between installations, density of population, and prior experience of the employee. When all these factors were considered, the workload performance of the temporary inspectors was about equal to that of a full-time regularly employed inspector who can average 20 to 22 inspections per week.

The temporary employees received a salary of \$200 biweekly, plus expenses when away from the assigned station. Usually, overnight expenses were kept to a minimum. Understandably, rapid processing of expense accounts is highly desirable.

The temporary services of high school and college teachers have expedited considerably our X-ray inspection activity. The recruitment of such employees thus will enable the State department of health to accomplish its objective of controlling the major medical and dental sources of X-radiation exposure to the general population.

Summary

Employment of competent vacation-time or other temporary personnel to make routine inspections of X-ray installations is a quick and effective way to hasten first-round inspections for enforcement of a radiation control program. Recruitment of temporary personnel should begin preferably 4 to 5 months prior to the scheduled date of employment. A wider choice of applicants is possible if recruitment begins early. As the inspection and enforcement program develops, the need for temporary inspection service will be reduced.

Our experience leads us to recommend that the applicant for temporary employment as an inspector be a high school or college science or engineering instructor who has use of a car and resides in or near an area where inspections are to be made. Qualified applicants are often found through local civil defense directors.

In the summer of 1958, nine temporary employees hired by the New York State Department of Health and supervised by local health officers performed well, averaging from 16 to

27 inspections per week. Employees were given pocket dosimeters to record their exposure to radiation. Weekly reports, including number of facilities inspected and the employee's exposure record, were sent to the State health department's central office by the local health departments. Reports of inspections were reviewed by the local health officer, who mailed results to each operator of an X-ray installation.

Legal Note . . . Recordkeeping Requirements

Individual and corporate business records required by statute are not afforded constitutional protection and may be used as basis for prosecution of those engaged in business under the "public records" doctrine. *United States v. Pine Valley Poultry Distributors Corp.*, 187 F. Supp. 455 (S.D.N.Y. 1960).

Defendants, three corporations and one individual, were charged with selling, transporting, or offering for sale uneviscerated slaughtered poultry in violation of the Federal Poultry Products Inspection Act (21 U.S.C. 451-469). That statute requires those engaged in processing, transporting, shipping, or receiving poultry or poultry products in commerce to maintain prescribed records and to permit authorized representatives of the Secretary of Agriculture to have access to and to copy such records. The prosecution was based on information copied from the defendants' records by inspectors of the Department of Agriculture.

The defendants moved to suppress evidence derived from the records, asserting that because the act does not provide immunity from prosecution for persons compelled to produce records, defendants were obliged to waive the constitutional protection against unlawful searches and seizures and were thereby deprived of due process of law, in violation of the fourth amendment of the Constitution of the United States. The individual defendant also claimed that the requirement that inspec-

tion and copying of the records be permitted violated his privilege against self-incrimination under the fifth amendment of the Constitution. The corporate defendants could not claim this privilege (*Hale v. Henkel*, 201 U.S. 43 (1906)).

The court rejected the claim of constitutional rights, relying on decisions of the Supreme Court of the United States which had held that records required by Congress of persons engaged in a business affected with a public interest are not private records, but assume the characteristics of public or quasi-public documents. Since, in a sense, the "required records" are in the public domain, they are not accorded the privileges of private papers. The court found that the defendants, who under the statute had custody of the records, had necessarily accepted the incident obligation to permit their inspection and could not claim the constitutional privileges with respect to them. The motion to suppress the evidence was therefore denied.—SIDNEY EDELMAN, *Assistant Chief, Public Health Division, Office of the General Counsel, Department of Health, Education, and Welfare.*

Program Notes

Immunizations

All Ohio children must now be immunized against poliomyelitis, smallpox, diphtheria, whooping cough, and tetanus before they enter school.

Shoe Store Radiation

Thirty-three States and the District of Columbia have either banned or strictly regulated the use of X-ray fluoroscope instruments used ostensibly for shoe fitting.

Update Nursing Homes

The New York City Board of Hospitals repealed on October 1, 1960, the so-called grandfather clauses of its hospital code relating to private proprietary nursing homes. These grandfather clauses, included in the code on October 16, 1954, exempted nursing homes then in operation from certain plant and equipment requirements. Nursing homes now must comply with the following requirements: 3-foot 6-inch doorways to patient rooms; 6-foot hallways; 100 square feet for each single bedroom; fully automatic wet sprinkler system from basement to attic; an adequate number of elevators large enough to admit wheel stretchers, and equipped with floor leveling devices to serve patients above the first floor; all patients' rooms above ground level; bathrooms with non-slip floors; and bathtubs and showers provided with handgrips in the wall. Applications for waivers or variances will be considered in specific instances upon appeal to a review board.

Radiological Health Training

The Atomic Energy Commission, in attempting to relinquish its radiation health control responsibilities to States, has been urging them to set up administrative machinery for the transfer.

One of the principal deterrents to more rapid progress in State programs for radiological health is the

nationwide shortage of physicians, engineers, physicists, and others technically trained in radiation protection for the general public.

To help overcome this shortage, the Public Health Service trained 600 health workers in fiscal year 1960, and will train 900 in fiscal year 1961. They come principally from municipal, State, and Federal agencies.

Additional courses are planned at two regional radiochemical laboratories and at a laboratory specializing in research and training in X-ray protection only.

State Licensing Plan

Kentucky became the first State to offer a plan to assume licensing and inspection of firms and institutions using radioisotopes and other radioactive material. According to the plan, the State health department's division of radiology would control the licensing of all byproducts and source and special nuclear material. The Atomic Energy Commission has licensed 8,237 organizations over the country, including 3,674 medical institutions and 725 colleges and universities.

Baltimore Progress

An 8 percent reduction in the infant mortality rate in 1960 compared with 1959, accompanied by the continuation of a low maternal mortality rate, has been reported by the Baltimore City Health Department. In contrast, records indicate a further rise in reported cases of infectious syphilis and a slowing of the decline of tuberculosis.

The health department stated that 7 years of fluoridating the city's water supply has prevented dental decay in children. In the past 5 years, the average number of permanent teeth decayed in 6-year-olds was one-fourth the former number.

Establishment of the Mayor's Neighborhood Conservation Committee has strengthened the city's well-

coordinated inspection and law-enforcement efforts in the battle against blight and slums. Preliminary findings of a 5-year study indicate that improved housing improves health.

TB Drug Distribution

The New Jersey State Department of Health has received funds to purchase antituberculosis drugs for distribution to its 66 biologics stations for use by patients who otherwise could not afford them. In cooperation with the New Jersey Tuberculosis and Health Association and county and local agencies, the department is urging establishment of registers on a county basis to ascertain the whereabouts and activities of tuberculous persons.

Minimum treatment standards have been agreed upon by tuberculosis control people in the State, with a program of treatment patterns and specific drugs and dosages.

New Jersey considers eradication of the disease an attainable objective in the 1960's, but warns that much work will be required. There were 2,971 cases reported in 1960 compared with 2,909 in 1959; deaths declined from 433 in 1959 to 369 in 1960.

Intractable Asthma

Children with intractable asthma, a perennial type which does not respond to conventional forms of treatment, have been studied by the National Foundation for Asthmatic Children at Tucson, Ariz., which provides programs for their care and rehabilitation. The studies find many factors in their chronic conditions, but reveal no greater emotional problems in this group than in a control population. In psychological tests, a majority of these children were above the normal range.

Of 141 children studied, 44.6 percent showed excellent improvement; 19.1 percent, moderate; 29.6 percent, fair; and 6.3 percent, no improvement. One child died.

Absenteeism at the school during 3 years of the 4-year study was less than for the public school system as a whole.